

IN THE CLAIMS:

Listing of Claims:

This listing of claims will replace all prior versions, and listing, of claims in the application.

1. (Currently amended) A buoyant platform apparatus comprising a wind speed measurement device, wherein the wind speed measurement device comprises a laser radar (lidar) arranged to make wind velocity measurements at one or more remote probe volumes of known position relative to said buoyant platform and a motion sensor that, in use, monitors motion of the buoyant platform.
2. (Original) An apparatus according to claim 1 wherein the wind speed measurement device is arranged to acquire wind velocity measurements from remote probe volumes at a plurality of positions such that a true wind velocity vector can be determined.
3. (Previously presented) An apparatus according to claim 1 wherein the lidar further comprises a beam scanner.
4. (Previously presented) An apparatus according to claim 3 wherein the beam scanner is arranged to provide a conical scan.
5. (Cancelled)
6. (Currently amended) An apparatus according to claim [[5]]1 wherein the motion sensor comprises a rotation sensor.
7. (Currently amended) An apparatus according to claim [[5]]1 wherein the motion sensor comprises a roll sensor.

8. (Currently amended) An apparatus according to claim [[5]]1 wherein the motion sensor comprises a heave sensor.

9. (Currently amended) An apparatus according to claim [[5]]1 wherein the motion sensor comprises a translation sensor.

10. (Currently amended) An apparatus according to claim [[5]]1 wherein a processor is additionally provided to receive the output of the motion sensor and to calculate the absolute position of the remote probe volume of each wind velocity measurement.

11. (Previously presented) An apparatus according to claim 10 wherein the processor receives the platform velocity measured by the motion sensor and compensates said wind velocity measurements for relative platform velocity.

12. (Previously presented) An apparatus according to claim 1 wherein a data storage is additionally provided.

13. (Previously presented) An apparatus according to claim 1 wherein the lidar is bistatic.

14. (Previously presented) An apparatus according to claim 1 wherein the lidar is optical fibre based.

15. (Previously presented) An apparatus according to claim 1 wherein the wind speed measurement device is mounted within the buoyant platform apparatus.

16. (Previously presented) An apparatus according to claim 1 wherein means are provided to clean the optical port through which the radiation transmitted and received by the lidar passes.

17. (Previously presented) An apparatus according to claim 1 wherein the lidar has a substantially vertical look direction during use.

18. (Previously presented) An apparatus according to claim 1 wherein the buoyant platform apparatus is a buoy.

19. (Currently amended) A method of determining wind velocity in the vicinity of a buoyant platform characterised by the steps of (i) taking a laser radar (lidar) attached to the buoyant platform ~~and~~ (ii) using the lidar to acquire wind velocity measurements from one or more remote probe volumes of known position relative to the moveable platform and (iii) using a motion sensor to measure motion of said moveable platform.

20. (Cancelled)

21. (Previously presented) A method according to claim 19 and comprising the additional step of (iv) acquiring wind velocity measurements from a plurality of probe volumes of known position relative to the moveable platform

22. (Previously presented) A method according to claim 19 and comprising the additional step of (v) compensating the acquired wind velocity measurements for the relative velocity of the platform.